Reviewer's report

Title: A birth cohort study to investigate the association between prenatal phthalate and bisphenol A exposures and fetal markers of metabolic dysfunction

Version: 1 Date: 1 August 2014

Reviewer: Nina Holland

Reviewer's report:

This paper is addressing a question with high public health significance, using a large well characterized cohort and established methods of assessment for BPA and phthalates. Several issues need to be addressed before it can be recommended for publication:

1. The main issue is the approach to statistical analyses. The authors do not justify their choice of using the range of adipokines for comparisons with environmental chemicals. They assigned the low and high 10% of subject adipokines as two groups of potential health concern, and the rest as "moderate level group". What would happen if instead they use more common quartile or tertile approach? How would it affect the findings of association between exposures and adipokines?

For instance, they used the quartile approach with BPA and Phthalates levels. They did not find any association with the continuous variable approach, and it appears that they try to "finesse" the criteria of grouping to "pull out" something statistically significant. The few findings they did achieve this way, may be spurious. Does not look like any effort to account for multiple comparison was made either.

2. Two chemicals were assessed but the authors did not consider a possibility of their combined effect? Neither they looked (or did not report) here correlations between these two chemicals. This may have important implications for the conclusions.

Minor issues:

1. It will be helpful to show QAQC data for chemical measurements, as they done for adipokines

2. Not clear whether adipokine levels were adjusted for newborn Z-score for the analyses.

3. Correct the typo on p.10, last paragraph: "adiponectin exposure" to "adiponectin level"

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I do not have any conflicts with reviewing this paper.